ORIGINAL

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Deployment of Wireline Services	)	CC Docket No. 98-147
Offering Advanced Telecommunications	)	
Capability	)	

COMMENTS OF xDSL NETWORKS, INC.

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Executive Summary

The Commission's proposed rulemaking with respect to advanced telecommunications services affords a unique and time-sensitive opportunity to realize the intentions of the Telecommunications Act of 1996 with respect to the entry of competition into markets previously dominated by the incumbent local exchange carriers ("ILECs"). Although it is painfully clear that the competitive goals sought by Congress with respect to local market competition in the provision of voice services have yet to be achieved, especially with regard to *residential* consumers, there remains a very significant sector of the telecommunications market where it is possible to foster real, vibrant, meaningful competition: the provision of high-speed data services such as xDSL.

The explosively-expanding Internet, and its high-speed carriage to and from the customer, is clearly the future of competition in the provision of data, video and voice services. Although there are numerous alternative technologies for providing high-speed data services, one of the most promising is the capability offered by xDSL, that of splitting (by use of a digital subscriber line access multiplexer or "DSLAM") the available bandwidth of a single copper twisted pair into a voice channel and a data channel, allowing provision of both conventional POTS services and very high-speed data over a typical residential phone line.

xDSL technology is of relatively recent vintage and has not been deployed to any great degree. Accordingly, the situation is similar to the cellular radiotelephone market of the early 1980s: there is a clear opportunity for the Commission to establish ground rules that will allow ILECs a fair opportunity to participate in this offering but prevent them from using their control of the bottleneck local monopoly to hamstring competition. There is an urgent need for the Commission to seize upon this fleeting opportunity, and promulgate rules that will establish the basis for real competition in the provision of xDSL, preventing the ILECs from using their dominant presence and control of network assets to slam this final open door shut in the face of consumers and competitive providers.

xDSL Networks agrees that the Commission's rules require ILECs to condition and make available xDSL-compatible loops to their competitors where "technically possible." However, there remain a variety of potential obstacles to competitive provision of xDSL services. First, existing analog copper loops often contain load coils and bridge taps which are incompatible with xDSL services. These must be removed where feasible: if the resultant loop is longer than 18,000 feet (the limit for full-bandwidth ADSL service provision), alternative arrangements (such as placement of DSLAMs within the required distance to the subscriber's location) must be made available.

Second, older digital loop carrier ("DLC") technology used by ILECs to concentrate analog copper loops, multiplex their signals and carry them via fiber back to the ILEC central office is incompatible with xDSL provision. This is a significant problem, since effectively 25% of all POTS is provided over loops served by these DLCs. Unless a sensible, economical and efficient approach to this problem is adopted by the Commission, this will have the result of making *25% of POTS subscribers unavailable to competitive carriers*. Such subscribers would be the exclusive domain of the ILEC, essentially creating a new subset of the bottleneck monopoly which Congress has sought to alleviate. Suitable alternatives are (i) requiring "sub-loop unbundling" which would allow competitors to access the analog copper loop *prior* to the DLC and transport it back to the central office, bypassing the DSLAM; (ii) collocation of competitors' DSLAMs in remote terminals alongside existing DLCs; (iii) collocation of ILEC DSLAMs in remote terminal locations, and permitting competitors access to the ILEC DSLAM; or (iv) upgrading the DLC to a "third-generation DLC" which integrates both DLC and DSLAM functions, ensuring compatibility with xDSL services. In the event that the ILEC installs its own DSLAM or integrated DLC in a given location, competitors should have unquestioned access to it on an unbundled basis.

In addition to allowing competitors the means to provide their own xDSL services, consistent with the Act, ILECs must be required to offer advanced telecommunications services, including xDSL-based services, on a wholesale basis for resale by other telecommunications companies. Wherever ILECs have the

ability to offer xDSL services to customers themselves, competitors should have the right to purchase those services at wholesale for resale.

Competitors must be also allowed to offer xDSL data-only service over the same loop which the ILEC utilizes to provide voice service to the end user. The FCC should adopt rules that prevent the ILECs from forcing their competitors to use a second telephone line for xDSL data-only services (where the primary line is used for voice traffic).

The ILECs' advanced services affiliates ("ASAs") must not be able to use the same corporate names as their ILEC parents or have access to their parents' marketing, customer, or other proprietary information. In addition, ASAs and their ILEC parents must not be allowed to jointly bill for their services. Nor should transfer of ILEC equipment to ASAs be permitted.

Finally, the Commission should adopt additional national collocation rules that reduce the cost and minimize the time required for competitors to collocate their equipment in the ILECs' premises. The Commission should adopt collocation rules that require ILECs to offer the following: (1) cageless collocation; (2) the use of shared collocation cages in which multiple carriers can share a collocation space; and (3) the elimination of minimum size requirements for the lease of collocation space. Moreover, the Commission must amend its collocation rules to allow for the collocation of advanced telecommunications services equipment, including DSLAMs, in the ILECs' premises. Just as importantly, the Commission's rules should ensure that ILECs cannot use issues associated with collocation as a means of delaying competitors' deployment of xDSL-based services.

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COMMENTS OF xDSL NETWORKS, INC.

I. Description of xDSL Networks, Inc. and Its Advanced Services

xDSL Networks, Inc. ("xDSL Networks"), by its undersigned counsel, respectfully submits the following comments in response to the Notice of Proposed Rulemaking issued in the above-captioned proceeding concerning deployment of advanced telecommunications capability to all Americans.[1]

xDSL Networks was formed to take advantage of breakthroughs in telephone modem technology and strong growth in demand for high-speed Internet access and broadband media and information services. xDSL Networks is using ADSL technology to build a vibrant new facilities-based network that will satisfy residential and business demand for high-speed access to advanced telecommunications services that continues to be unmet by Internet service providers ("ISPs") and online service providers.

xDSL Networks will focus its efforts initially on serving a broad geographic area in the Eastern United States. xDSL Networks plans to meets the needs of business and residential

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[1] *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, Notice of Proposed Rulemaking, CC Docket No. 98-147, FCC 98-188, released August 7, 1998 ("*Section 706 NRPM*").

customers by becoming a marketing and customer service-driven, high-performance, hybrid ISP/online service provider that brings together subscriber demands for more bandwidth and richer applications, with content providers' needs for high-speed access to the "last mile." By integrating its ADSL access network and an ISP with content and applications specifically designed to take advantage of high-bandwidth networks, xDSL Networks intends to create a highly marketable product.

II. Overview: Advanced Telecommunications Services Such as xDSL are Crucial to the Establishment of Effective Competition.

Although the Internet has been in existence since the late 1960s, it has positively exploded in the past 5 years, changing the face of telecommunications, dissemination of information and even significantly altering the manner in which many businesses engage in commerce. In particular, residential use of the Internet stood at approximately 17 million households in 1996, and it is estimated that it will increase to 40 million by 2001. This radical expansion of the Internet has increased the importance of a high-speed delivery system; however, relatively few residential users presently have access to the Internet at speeds in excess of 56 kbps. The demand for high-speed access at reasonable price points is nothing short of incredible. It is estimated that at monthly rates averaging between $35 and $50 per month, the value of total high-speed Internet subscription revenues will reach approximately $4 billion in 2001.

xDSL technology makes it possible to deliver high-speed data services and conventional voice services over the same single copper pair used in conventional households to deliver POTS – no significant modification is necessary at the subscriber's premises, apart from plugging in a xDSL modem. The ease of use and very large capacity of this new service is likely to appeal to a mass market. xDSL notes, for example, that Dell Computers has just entered into a venture with

SBC pursuant to which an ADSL modem will be built into a new line of computers so that purchasers can obtain high-speed Internet services from SBC.[2] This is only the beginning: the way in which this market develops depends on the actions the Commission takes in this proceeding.

The Commission has a unique opportunity to foster competition in the provision of this new industry. At present, although the means of delivery of xDSL services is over copper loops overwhelmingly controlled by ILECs, the ILECs themselves are essentially at the starting gate for offering xDSL services, just as are the competitive carriers. As pointed out by the Commission in its Memorandum Opinion and Order:

> Today, incumbent wireline carriers and new entrants are at the early stages of deploying xDSL and other advanced services. Thus, the incumbent does not currently enjoy the overwhelming market power that it possesses in the conventional circuit-switched voice telephony market.[3]

This does not mean, however, that the ILFCs and the competitive carriers are on equal footing. It must be kept in mind that the *only* valid comparison is that the service itself is new to all offerors: the ILECs still own and control the public network, they still have redoubtable market power, and they still have the expertise and the will to place countless obstacles in front of would-be competitors. It is more comparable to the situation which arose in the early 1980s with respect to the deployment of cellular radiotelephone: the wireline telephone companies were unquestionably in a far more powerful position to compete in the provision of this service, despite the fact that it was a new service. The Commission wisely partitioned the available bandwidth into two bands, and

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[2] See "Dell taps AT&T, Excite, SBC for Internet Services," Reuters, September 23, 1998 (attached hereto as Exhibit B).

[3] *Memorandum Opinion and Order* in Docket 98-188 (rel. August 7, 1998) at ¶ 10.

required the wireline providers to offer their services for resale by competitive carriers until real competition could get started.

In this case, it is not possible to divide the spectrum in each jurisdiction into two separate bands – the distinctions needed here are more subtle and complicated. However, unless competitors are given a fair chance to access the crucial network elements of the ILEC needed to ply their trade, real competition will not have a chance to develop. xDSL urges the Commission to keep in mind the overwhelming inherent advantages of ILECs when promulgating rules that can make, or break, the competitive character of one of the most important telecommunications market sectors for the future.

III. xDSL Networks' Recommendations to Promote Competition in the Deployment of Advanced Services

A. ILECs Must Provide Properly Conditioned xDSL-Compatible Loops to Their Competitors for the Deployment of xDSL Services

xDSL Networks strongly supports the Commission's proposal to establish additional rules for local loops pursuant to sections 201 and 251 of the Act in order to remove barriers to entry by competitors and speed the deployment of advanced services.[4] As the Commission concluded, competitors must have the ability to purchase loops from the ILECs as unbundled network elements ("UNEs") that are properly conditioned to provide xDSL services, and the ILECs must "take affirmative steps to condition existing loop facilities to enable requesting carriers to provide services not currently provided over such facilities."[5] The failure to establish such rules will provide ILECs an opportunity to bar competitors from many requested subscriber locations by claiming that xDSL

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4 *Section 706 NRPM* at ¶ 154.

5 *Id.* at ¶¶ 53 and 157.

services are "technically infeasible" due to some network characteristic or feature.

Analog copper loops frequently incorporate load coils and bridge taps or other features that would prevent the transmission of xDSL services, and thus these customers are effectively unavailable to competitive carriers unless the ILEC agrees to condition the loops.

Moreover, where the targeted subscriber's analog copper loop is aggregated at an old-technology DLC, this is also incompatible with xDSL service provision. In fact, according to a recent study conducted by the Yankee Group, 25% of all local loops in the United States pass through DLCs.[6] Those loops passing through DLCs are of crucial importance to service providers such as xDSL Networks because they tend to serve the more affluent (and potentially more technically sophisticated) communities that are key markets especially at the outset of service provision. As the Commission stated in the *Section 706 NPRM*, loops passing through DLCs can pose a *significant barrier* to the deployment of advanced telecommunications services, such as xDSL services, because many (if not most) loops containing DLCs are not presently able to support xDSL technology.[7]

However, these obstacles cannot be allowed to prevent access by the competitive carrier to the desired ILEC customer. xDSL Networks strongly agrees with the Commission's conclusion that ILECs must make available properly conditioned loops to competitors, including those passing through DLCs, that are capable of transporting high-speed digital signals where "technically

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6 *The ADSL Equipment Marketplace*, The Yankee Group (1998).

7 *Section 706 NRPM* at ¶ 166. The Commission agreed that "in order to provide xDSL-based service over a loop passing through a remote terminal [such as a DLC], the loop must either be reassigned to a physical copper pair connecting the end user's premises to the central office, or the xDSL portion must terminate at the remote terminal, where it can be converted to a format compatible with the digital loop carrier (*i.e.*, through the use of a DSLAM at the remote terminal)." *Id.*

feasible."[8] As the Commission stated in the *Section 706 NPRM*, "the incumbent LEC's obligation to provide requesting carriers with fully functional conditioned loops extends to loops provisioned through remote concentration devices such as digital loop carriers (DLC)."[9]

Unless ILECs are required to condition both analog loops and loops passing through DLCs to ensure their compatibility to provide xDSL services, or otherwise provide access to subscribers served by such loops (such as by sub-loop unbundling, see *infra*) competitors will be prevented from providing advanced telecommunications services to customers served by 25% of the ILECs' local loops. This would be a devastating blow to competitive carriers, and would only serve to increase the entrenched monopoly of the ILECs.

B. xDSL Networks' Proposals to Ensure That ILECs Properly Condition and Make Available xDSL-Compatible Loops to Their Competitors

xDSL Networks submits that the Commission should take the following approach to ensure that the ILECs' loops are properly conditioned and available to competitors to provide xDSL-based services. First, as stated above, the Commission must ensure that ILECs properly condition analog copper loops to provide xDSL services by requiring them to remove loop equipment such as load

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[8] *Id.* at ¶ 167. Indeed, the operative presumption should be that provision of conditioned loops is "technically feasible" in every case, absent a persuasive technical showing from the ILEC why such services cannot be provided. In any event, an ILEC's provision of xDSL services to a customer should be taken as conclusive proof that it is "technically feasible" to make available to competitive carriers the means to serve the customer.

[9] *Id.* at 54. Furthermore, the Commission concluded in the *Local Competition Order* "that it was 'technically feasible' to unbundle loops that pass through an integrated DLC or similar remote concentration devices, and required incumbent LECs to unbundle such loops for competitive LECs." *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, Order, CC Docket Nos. 96-98, 95-185, 11 FCC Rcd 15499, 15692 (rel. August 6, 1996) ("*Local Competition Order*"). These rules were specifically upheld by the Eighth Circuit in *Iowa Utilities Board v. FCC*, 120 F.3d 753, 818 (8th Cir. 1997), *cert. granted sub nom., AT&T Corp. v. Iowa Utilities Bd.*, 118 S. Ct. 879 (1998).

coils and bridge taps which are incompatible with the provision of xDSL services. If this results in a copper loop of more than 18,000 feet in length (the limit for full-bandwidth ADSL services), the ILEC should offer other alternatives, such as allowing the placement of the competitive carrier's DSLAM within 18,000 feet of the desired location, or placement of the ILEC's own DSLAM in the required position for service to the customer.[10]

If none of the above alternatives is "technically possible," the Commission should require ILECs to upgrade the subject DLC to a newer, third-generation DLCs which contains integrated DSLAMs that would enable competitors to provide xDSL services over the existing loops.[11] Where these third- generation DLCs have been installed, competitors should have the unquestioned right to make use of their capabilities in order to provide service to their customers.[12] Moreover, on a going-forward basis, the Commission should require that any "new" DLC installations, or replacements of older equipment (i) incorporate xDSL capabilities or (ii) allow for efficient modification to add such capabilities as an upgrade.

Although xDSL considers that the ILEC has the responsibility to condition its lines for xDSL services, xDSL Networks nevertheless agrees with the Commission's tentative conclusion that ILECs must also be required to unbundle sub-loop elements and provide competitors with access to the remote terminals (and DLCs) so that competitors can install their own DSLAMs at the DLCs

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[10] As the Commission noted in the *Section 706 NPRM*, loading coils and bridged taps render an analog line incapable of carrying xDSL services. *Id.* notes 315, 316.

[11] Such third-generation DLCs are currently manufactured by a variety of companies, including: ADC Telecommunications, AFC, DSC, Lucent, NEC, Nortel, and Reltec.

[12] Alternatively, ILECs should be required to replace the DLCs serving end users with copper loops connecting the end users with the ILECs' central offices so that competitors can install their DSLAMs in the ILECs' central offices. However, this option would only be acceptable where the length of the copper local loop is short enough to permit the provision of full-bandwidth xDSL-based services (generally less than 18,000 feet).

to provide xDSL-based services wherever this is necessary or desirable.[13] In addition, the Commission must permit competitors to collocate remote multiplexers at the ILECs' DLCs which could enable the competitors to bypass the DLCs when providing xDSL services and locate their DSLAMs in the ILECs' central offices and additionally, require ILECs to lease a portion of the line connecting the DLCs to the central office to their competitors. This would enable new entrants to provide advanced services on a quick and relatively efficient basis notwithstanding that the loop is concentrated by a DLC. This added capability is essential: even if ILECs are required to present conditioned loops on demand, the upgrades necessary to some loops may cause damaging delays that make it impossible for competitors to serve their customers promptly. If sub-loop unbundling is available, this would be an alternative that would allow CLECs themselves to take action in instances where that becomes necessary.

The Commission's final rules must ensure that ILECs cannot use "technical infeasibility" or insufficient space at the remote terminal or DLC as a barrier to competition. One possible solution to the "technical feasibility" or space concerns would be to require those ILECs raising these concerns to replace these DLCs with xDSL-compatible third-generation DLCs and offer their capabilities to competitors.

Finally, xDSL Networks strongly agrees with the Commission's conclusion that ILECs must be required to offer for resale to their competitors advanced services, including xDSL-based services, under Section 251(c)(4) of the Act.[14] The Commission must require ILECs to offer for resale those

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[13] *Id.* at ¶ 174. xDSL Networks believes that the Commission should go farther and hold that collocation by competitors at the ILECs' remote terminals or DLCs is presumptively "technically feasible" and that the burden of proof should be on the ILECs to refute this presumption.

[14] *Id.* at ¶ 187.

advanced telecommunications services marketed by ILECs to residential or business users or to Internet service providers.[15] xDSL Networks agrees with the Commission that these advanced services fall within the category of retail services that Congress intended to be subject to the resale obligation. The ability of competitors to resell xDSL services will increase competition in the marketplace and enable competitors to provide these services to customers while they are deploying their xDSL facilities.

C. Competitors Providing Data-Only xDSL Service Must Be Able to Provide the Service Over a Single Telephone Line With the ILEC's Voice Traffic

Competitors must be allowed to offer xDSL services over the same, single loop which the ILEC uses to provide voice service.[16] As the Commission recognized, xDSL technology separates a single loop into a plain old telephone service ("POTS") channel and a data channel and can carry both POTS and data traffic over the loop simultaneously.[17] Competitors offering data-only xDSL services must be allowed to lease capacity on the local loop necessary to provide advanced services while leaving sufficient capacity for the ILEC to provide POTS. This type of loop sharing would not create significant technical difficulties because existing DSLAMs and end user modems already permit the provision of different data services, or voice and data over the same loop.

If ILECs are permitted to require their competitors to lease an additional local loop for xDSL data-only service, the ILECs could unfairly impose an additional cost on their competitors' xDSL services that the ILECs would not face themselves. For example, Bell Atlantic is currently offering its xDSL service to its customers, called Infospeed DSL™, which offers both POTS and ADSL over

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15 *Id.* at ¶ 189.

16 *Id.* at ¶ 162.

17 *Id.*

a single local loop.[18] Therefore, Bell Atlantic is able to offer ADSL service to its customers without requiring them to purchase an additional telephone line.

The Commission's rules must ensure that the ILECs' competitors have the same ability to provide xDSL data services over a single phone line; otherwise, competitors will face the unfair additional cost of purchasing a second line from the ILEC to provide the same service. The Commission should place the burden on the ILECs to work together with competitors to resolve any possible interference or interoperability issues raised by the sharing of the local loop for POTS and xDSL data-only services.[19]

D. ILECs' Provision of Services Through Advanced Services Affiliates

1. The Advanced Services Affiliate Must Not Be Able to Use the Parent ILECs' Brand Name or Have Access to the ILECs' Marketing, Customer, or Other Proprietary Information

In order to prevent an unfair competitive advantage by ILECs' advanced services affiliates ("ASAs") over their competitors, ASAs must not be able to share the same corporate names as their ILEC parents and must not have access to their parents' marketing, customer, or other proprietary information. Specifically, ASAs must not have access to parent ILECs' customer lists or other proprietary marketing information the ILECs have maintained about their customers.

2. The Parent ILEC and Advanced Services Affiliate Must Not Be Able to Jointly Bill for Voice Traffic and Advanced Services

xDSL Networks believes that ASAs and their parent ILECs must not be allowed to jointly

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[18] *See Infospeed DSL™: It works on your existing phone line*, Bell Atlantic Website, http://www.bell-atl.com/adsl/more_info/how. ht ml (1998). A copy of the documents describing this service from Bell Atlantic's Website are attached hereto as Exhibit A.

[19] The Commission will need to promulgate rules setting forth the means by which a single loop is to be shared (*e.g.*, between POTS and data-only xDSL service), and issues such as the responsibility for troubleshooting, handling customer complaints, etc. will have to be resolved.

bill for advanced services, such as xDSL, and POTS services. Joint billing would enable ASAs to unfairly utilize the billing management resources of the ILECs and thus minimize their costs compared to their competitors. In addition, joint billing would reinforce the appearance that all services are being provided from a single entity, thus enabling the subsidiary to capitalize on the name recognition and "branding" of the parent ILEC. Therefore, ASAs should be required to separately bill their customers for advanced telecommunications services. In the unlikely event that the Commission allows ASAs to insert their bills in the parent ILEC's billing envelope, this right should also be afforded, on an equal basis, to competitive providers.

3. The Commission Should Not Allow the Transfer of ILEC Equipment to ASAs.

In keeping with the principle that ASAs must be kept at arms'-length from their parent companies, xDSL considers that it would be improper to allow the transfer of ILEC equipment to the subsidiaries. Any relevant equipment, however, could be offered for sale at fair market value to all potential purchasers, including ASAs, assuming suitable safeguards and documentation are put in place. No *de minimis* rule should be adopted, because the ILECs' advantages over competitive carriers already exceed the *de minimis* level, and any additional advantages afforded by transfers from the parent should not be tolerated.

E. The FCC Must Adopt National Collocation Standards That Reduce the Cost and Time Involved for Competitors to Collocate Equipment in the ILECs' Premises

As discussed in Section II. A. above, xDSL Networks strongly supports the Commission's proposal to establish additional national collocation standards pursuant to sections 201 and 251 of

the Act in order to remove barriers and speed the deployment of advanced services.[20] xDSL believes the adoption of additional national collocation standards will encourage the development and deployment of advanced telecommunications services by providing increased certainty for ILECs and competitors and by minimizing unfair barriers to competition.

1. ILECs Must Be Required to Offer Less Costly Forms of Collocation – *i.e*, Cageless Collocation, Shared Collocation, and Eliminate the Minimum Size Requirements for Collocation

xDSL Networks strongly agrees with the Commission's conclusion that ILECs should be required to offer collocation arrangements to new entrants that minimize the space needed by each competing provider for the deployment of advanced telecommunications services.[21] In addition, xDSL Networks agrees with the Commission that ILECs should be required to offer less costly forms of collocation including: (1) cageless collocation; (2) the use of shared collocation cages in which multiple providers could locate their equipment in accessible spaces or locked within secure cabinets; and (3) the elimination of minimum size requirements for the lease of collocation cages.[22] The FCC should adopt additional collocation rules that reduce the costs for competitors to collocate in the ILECs' premises, reduce the time period required to request and receive collocation space from ILECs, and minimize the ILECs' ability to use issues associated with collocation as a means of deterring competition.

2. Competitors Must Be Allowed to Collocate DSLAMs in the ILECs' Central Offices to Provide xDSL Service

The FCC should amend its collocation rules to allow for the collocation of advanced services

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20 *Id.* at ¶ 123.

21 *Id.* at ¶ 137.

22 *Id.*

telecommunications equipment, including DSLAMs, in the ILECs' premises.[23] The Commission concluded that ILECs must not be allowed to impede competing providers from offering advanced services by imposing "unnecessary restrictions on the type of equipment that competing providers may collocate."[24]

In order for competition to emerge in the market for advanced telecommunications services, competing providers must have the same opportunities as the ILECs to deploy new equipment in their collocation space. It is essential that competing providers have the ability to collocate DSLAMs in the ILECs' premises. As the Commission stated in the *Section 706 NPRM*, xDSL-based services are telecommunications services and not information services, and therefore, competitors would not be precluded from collocating such equipment under Section 251(c)(6) of the Act.[25]

3. ILECs Must Not Be Allowed to Use Collocation as a Means of Delaying Competitors' Deployment of xDSL Services

Presently, the high cost of collocation, the delays by ILECs in providing requested collocation space, and the lack of available collocation space all place significant barriers on competitors who wish collocate in the ILECs' premises for the provision of advanced telecommunications services. The FCC's final collocation rules should prevent ILECs from continuing to use collocation as a means of slowing competition by rival telecommunications companies.

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23 "Premises" includes the ILECs' central offices, serving wire centers, tandem offices, as well as all of the buildings or similar structures owned or leased by the ILECs that house the ILECs' network facilities [or DLCs]. *See Local Competition Order* at ¶ 573.

24 *Id.* at ¶ 129.

25 *Id.* at ¶ 132 note 247.

Conclusion

Advanced telecommunications services such as xDSL can open the door to a new regime of capability for residential and business customers. The Internet and the high-speed data services which make it widely available are a key focus of competitive telecommunications in the near future. The Commission must promulgate appropriate rules to ensure that ILECs may not utilize their existing or future network architecture or other subtle devices to exclude competitors from this burgeoning marketplace. xDSL Networks supports the Commission's tentative conclusion that steps must be taken to ensure that ILECs permit appropriate access to network elements and modify their technology, as necessary, to provide competitors with a reasonably level playing field.

Respectfully submitted,

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Dated: September 25, 1998

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Exhibit A

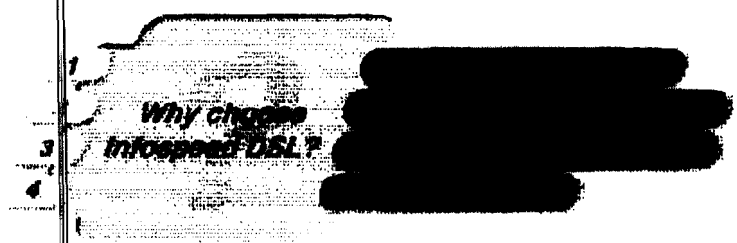
[redacted]

Infospeed DSL

[redacted]

Imagin up to 7.1 Mbps of pure speed to your home

Tired of waiting for downloads? Want to get more from your PC? Tap into the Web's true potential and use it the way you want to. Your existing phone line becomes a dedicated high-speed connection that ends the hassle of dial up and busy signals. Experience video, audio, and enhanced graphics - all at speeds up to 240 times faster than your old 28.8 modem.



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Infospeed DSL: It works on your existing phone line.

Bell Atlantic Infospeed DSL is an Asymmetrical Digital Subscriber Line (ADSL). ADSL is a modem technology that uses bandwidth from a part of your telephone line that doesn't get used during voice communications. This is why the use of your phone or fax does not affect your Infospeed DSL connection.

The line is split at your home, carrying voice to your telephone or fax machine and data to your computer via a DSL modem, also called an ADSL Terminal Unit-Remote (ATU-R). An Ethernet card is required in your computer to interface with the DSL modem. A standard Ethernet cable connects the DSL modem to the Ethernet card.

As the name implies, ADSL is an asymmetric technology. Asymmetric means that incoming and outgoing data travels at two different speeds. Infospeed DSL provides higher bandwidth speeds where you need it most - from the Internet (or office) to your home. Smaller bandwidth is provided upstream (from your home). DSL technology is distance sensitive - so you must reside within a specific distance from your Bell Atlantic Central Office to get it. It is the upstream bandwidth that limits the distance.

Infospeed DSL is available at the following speeds:

- Infospeed 640K, which will provide downstream speeds up to 640 Kbps and upstream speeds up to 90 Kbps.
- Infospeed 1.6M, which will provide downstream speeds up to 1.6 Mbps and upstream speeds up to 90 Kbps.
- Infospeed 7.1M, which will provide downstream speeds up to 7.1 Mbps and upstream speeds up to 680 Kbps.

Even more exciting, we offer special packages that combine Infospeed DSL with our Bell Atlantic.net ISP services, starting as low as $59.95! The packages are as follows:

- Personal Infospeed, which includes Infospeed 640 Kbps and BellAtlantic.net.

- Professional Infospeed, which includes Infospeed 1.6 Mbps and BellAtlantic.net.
- Power Infospeed, which includes Infospeed 7.1 Mbps and BellAtlantic.net.

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☒ Talk and surf simultaneously

Infospeed DSL gives you the flexibility to do your work, your browsing, and your general search for information without having to disconnect every time you need to make a call or use the fax. Browse the Web on a weekend afternoon without the worry of missing a call about the night's plans. Find a quick piece of information on the Web without the hassle of dialing up, signing on, and waiting for downloads.

Infospeed DSL can simplify your life by making your connection work for you.

- **You expand the capabilities of your existing phone line**, which makes Internet use more convenient. Use your telephone or fax while you're on the Web or connected to the office. No need to sign off as with traditional modems.
- **Your connection is your own.** With a cable modem, your connection speed will vary depending on how many other customers are sharing the line. With Infospeed DSL you get all of the power of your access speed, all of the time.
- **Your connection is always on.** This means no dial-ups, no sign-ons, no busy signals, and no connection errors.

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Privacy

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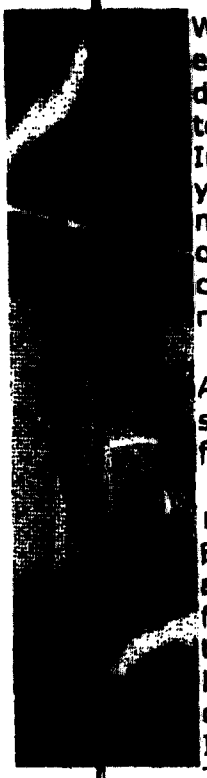
Keeps You Connected



With ADSL technology, Bell Atlantic turns your existing phone line into a constant high-speed data connection, while allowing you to continue to use your phone or fax line as usual. Because Infospeed DSL gives you automatic access to your ISP, you will never have to dial up, which means you won't have to deal with the hassles of busy signals and connection errors. Simply click your web browser application and you're ready to go.

As you can see below, this dedicated connection serves as a powerful tool for accessing data from your home.

Internet/Online

Bell Atlantic's Infospeed DSL service sends data at rates ranging from 640 Kbps up to 7.1 Mbps from the Internet to your home. Depending on the package you choose, your access speed will be from 22 to 246 times faster than that of a conventional 28.8 Kbps modem, making Internet navigation more practical and reliable. The greatly increased speeds of Infospeed DSL turn your PC into a powerful resource. Use it to experience the benefits of enhanced multimedia content, or, simply, to get the information you need quickly and efficiently.

Remote LAN Access/Telecommuting

The trend in telecommuting continues to grow; so does the demand for more efficient tools to help people who work from home keep current with activities taking place back at the office. The bandwidth provided by Infospeed DSL eliminates a key disadvantage of telecommuting: slow download time. For instance, Infospeed can cut the time required to transmit a typical Windows screen (50 Kb) from 21 seconds down to a fraction of a second. It will feel just like you're in the office - but without the headaches of commuting.

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